

## TEST CONSTRUCTS

```
if [ condition-true]
then
  command1
  ...
else
  command1
  ...
fi
```

-e file exists

-f file regular

-d file directory

-r read permission

“\$a” < “\$b” ( -lt)



## LOOPS

```
for arg in [list]  
do  
    command1  
    ...  
done
```

**Loop control commands:  
brack  
continue**

```
while [condition]  
do  
    command1  
    ...  
done
```

```
until [condition-is-true]  
do  
    command1  
    ...  
done
```

## TESTING

```
case "$variable" in
    "$condition1")
        commnad
        ....
    ;;
    "$condition2")
        commnad
        ....
    ;;
esac
```



## FUNCTION

```
name_function () {  
  instruction  
  instruction  
  instruction  
  ....  
}
```

## “REGULAR EXPRESSIONS”

```

#      :      ;
(set) --    -
! |
*      ?
$      $#     $*    $@    $?    ${}    $1 .....
[]     ()     (())  {}    ${par##a*g}  ${par1:par2}
<      >     <<    >>
=      +     %     /     *     **
||     &&    ==

```

## “EXSPANSION”

`${var-var_def}`

`${var:-var_def}`

`${var:=var_def}`

`${var:+val_def}`

`${var:?mess}`

**(exit script)**

## “PATTERN MATCHING”

<code>\${#var}</code>	<code>12341234</code>	<code>---&gt;</code>	<code>8</code>
<code>\${var:number}</code>	<code>12341234:3</code>	<code>---&gt;</code>	<code>41234</code>
<code>\${var:start:fine}</code>	<code>12341234:3:2</code>	<code>---&gt;</code>	<code>41</code>
<code>\${var#sketch}</code>	<code>12341234#*3</code>	<code>---&gt;</code>	<code>41234</code>
<code>\${var##sketch}</code>	<code>12341234##*3</code>	<code>---&gt;</code>	<code>4</code>
<code>\${var%sketch}</code>	<code>12341234%2*</code>	<code>---&gt;</code>	<code>12341</code>
<code>\${var%%sketch}</code>	<code>12341234%%2*</code>	<code>---&gt;</code>	<code>1</code>
<code>\${var/sketch/mod}</code>	<code>123412/2/-</code>	<code>---&gt;</code>	<code>1-3412</code>
<code>\${var//sketch/mod}</code>	<code>123412/2/-</code>	<code>---&gt;</code>	<code>1-341-</code>



## "POSITIONAL VAR"

<b><code>\$number - \${number}</code></b>	<b>(var number)</b>
<b><code>\${0}</code></b>	<b>name and path</b>
<b><code>\${#}</code></b>	<b>number of var</b>
<b><code>\${@}</code></b>	<b>argument</b>